

APPENDIX G

PRELIMINARY CONSTRUCTION COST ESTIMATES FOR CONGESTION MANAGEMENT PLAN

**G-2 PRELIMINARY CONSTRUCTION COST ESTIMATES
FOR
CONGESTION MANAGEMENT PLAN**

Add One Lane Each Direction on Freeway			
Asphalt Concrete Pavement		\$2,300,000 Per Mile	
Portland Cement Concrete Pavement		\$2,800,000 Per Mile	
Includes:	Excavation Paving Section Barrier Shoulder Upgrade Drainage System Traffic Control Mobilization @10% Design @11% Construction Mgt. @12.5%	Excludes:	Environmental Costs Right of Way Widening of Bridge Structures Added Retaining Walls Added Sound Walls
Widen Existing UC Structures			
Total Cost =		\$160 Per Square Foot	
Includes:	Structure Mobilization @10% Design @11% Construction Mgt. @12.5%	Excludes:	Environmental Costs Right of Way Traffic Control Ramp Modifications Signal/Lighting Up Grades Drainage Upgrades Added Retaining Walls Added Sound Walls
Diamond Interchanges			
\$10,000,000	EACH	NEW IC	Minimal Row/Environmental
\$15,000,000	EACH	NEW IC	Includes Row/Environmental
\$20,000,000	EACH	EXISTING	Minimal Row/Environmental
\$25,000,000	EACH	EXISTING	Includes Row/ Environmental
Includes:	Structure Retaining Walls Soil Nail Walls Drainage System Ramps Mobilization @ 10% Design @ 11% Construction Mgt. @ 12.5%	Excludes:	As listed

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Retaining Walls			
Height Feet	Structure Cost \$/LF	Mobilization Design Constr. Mgt. \$/LF	Total \$/LF
4	\$190	\$70	\$260
6	\$260	\$90	\$350
8	\$380	\$140	\$520
10	\$430	\$150	\$580
12	\$480	\$170	\$650
14	\$590	\$210	\$800
16	\$660	\$240	\$900
	Excludes: Environmental Costs Right of Way		
12' High Sound Walls (Masonry Block on Footing)			
Structure Cost \$/Mile		Mobilization Design Constr. Mgt. \$/Mile	Total \$/Mile
\$800,000		\$300,000	\$1,100,000
Widen Conventional Highway			
1.	Add one outside lane (Work includes earthwork, modify existing drainage system and construct AC shoulder section. Asphalt Concrete Pavement	\$1,000,000/Mile	
2.	Add one outside lane each direction (Work includes earthwork, modify existing drainage system and construct AC shoulder section) Asphalt Concrete Pavement With Median Concrete Barrier With Median Double Thrie Beam Barrier	\$2,000,000/Mile \$2,200,000/Mile \$2,300,000/Mile	
Local Interchange Improvements			
1.	New Interchange Urban Interchange Partial – Cloverleaf Interchange (Work includes new OC structure, earthwork, signal) Diamond Interchange (Work includes new OC structure, earthwork, signal)	\$10,000,000 to \$17,000,000 \$6,000,000 \$5,000,000	

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Local Interchange Improvements CONT...		
2.	Reconstruct Existing Interchange	
	Realign and widen existing ramps (to 2 lanes)	\$750,000/Each Ramp
	Construct Loop on – ramps (Does not include realigning existing ramp)	\$700,000/Each Ramp
	Upgrade existing Diamond IC to Partial – Cloverleaf	\$6,000,000
3.	Improve Existing Interchange	
	Widen ramps (From one to two lanes)	\$350,000/Each Ramp
	Widen existing OC structure	\$110/Sq. Ft.
	Signalize ramp intersection	\$90,000/Location
	Upgrade existing signal at ramp terminal	\$75,000/Intersection
	Upgrade existing signal at ramp terminal (Add lights only)	\$25,000/Each
4.	Ramp Metering System	\$60,000/Each location
Intersection Improvements		
1.	Signalization of local intersection (with some roadwork)	\$250,000
2.	Upgrade existing intersection signalization	\$75,000
3.	Upgrade existing Traffic Controller/Assembles	\$40,000/Each
4.	Install new signal	\$90,000/location
5.	Add signal heads	\$25,000/Intersection
6.	Construct left – turn lane (240' long)	\$50,000/Each Location
7.	Street widening (12' wide) (Pavement only)	\$180,000/Mile
8.	Curb and gutter (Type A2-8)	\$15/LF

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Other Improvements		
1.	Construct new OC structure (Does not include roadway work)	\$100/Sq. Ft.
2.	Construct Retaining Walls (Type 1)	\$285/LF (H=8') \$360/LF (H=10') \$460/LF (H=12') \$560/LF (H=14')
3.	Construct Soundwall	\$1,000,000/Mile (H=12')
4.	Traffic Management Plan	10% of total construction costs
<p>NOTE: This cost estimate does not include the following items:</p> <ol style="list-style-type: none"> 1. R/W engineering, appraisal, acquisition and utilities relocation costs. 2. Minor items and supplemental work (10%). 3. Mobilization (10%). 4. Contingencies (25%). 5. Landscaping costs. <p>General Note: When adding a through lane, the minimum distance is 600' approach and 600' departure to the next intersection.</p>		